

WHAT IS CLAIMED IS:

1. A method of analyzing grammar using a part-of-speech tagged parser with a template-based computer-assisted learning system comprising the steps of:

preassigning words and phrases of an input sentence with part-of-speech tags;

regarding any phrase preassigned with a part-of-speech tag as one word;

setting a probability of preassigned words having a given tag as 1;

setting a probability of nonassigned words having a given tag as 0;

obtaining a plurality of grammar trees;

finding a combination within said plurality of grammar trees to maximize probability of the final grammar tree being any of a grammar tree with the following formula to choose the one with largest probability P_{tree} :

$$P_{tree}(T) = \prod_{rule, in T} P_{rule} \cdot \prod_{tag_j of word_j in T} (P(tag_j | word_j))^2$$

where P_{rule} denotes the probability of a rule to take on rule i , $P(tag_j | word_j)$ is the probability of the word j being assigned to part-of-speech tag be tag j .

2. A method of applying a part-of-speech tagged (POST) parser in a template-automaton-based computer-assisted language learning system, comprising the steps of:

reading a keyed-in sentence;

checking the sentence with a standard spell check model, and correcting spelling errors;

finding a best matched path having a highest similarity value with the input sentence, providing lexical error information, feedback information as well as a score of the input sentence;

according to the error feedback information, finding a correct path in the template;
applying the POST parser to obtain a syntactically bracketed grammar structure for
the correct path; and
drawing the parsed tree of the correct path and marking the errors at leaves of the
relevant tree.

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